

REMARKS/ARGUMENTS

Claims 1-10, 12-14, 27-40, 42-47, 49-52, 54-57, 60-63, 66-68, 70, 73-75, 77, and 89-98 have been canceled.

Claims 11, 15, 18, 21-26, 29, 41, 48, 53, 64-65, 69, 76, 78, 87-88, 99, 108, 114, 115 and 116 have been amended.

New claims 123-125 have been added.

Supplemental IDS

The examiner cited an English language abstract to the following Chinese patent:

Chinese Patent No.	1115309C
Assignee	Jiang Zhaoguang

Applicant provides a full copy of the Chinese patent, including an English translation prepared by SHANGHAI PATENT & TRADEMARK LAW OFFICE – Shanghai, China. Applicant believes that the translation of the above-listed Chinese patent is accurate. Applicant also submits a Supplemental IDS listing the referenced patent to insure that the full copy is listed on the front of any patent that issues in the case.

Applicant believes that no fee is required for filing a full copy and a translation of the cited patent. However, if Applicant is mistaken, the Commissioner is hereby authorized to charge any fees in connection with Supplemental IDS to Deposit Account No. 50-0997 (RESINC-0004-US) maintained by Paula D. Morris & Associates, P.C.

Claim Rejections – 35 U.S.C. §102(a) and (b)

Rejection over Comrie, Ko, Sobolev, Day et al, Classen et al, Fu et al.

The examiner rejected claims 1-122 as being anticipated by numerous references including in part Comrie, Ko, Sobolev, Day et al, Classen et al, Fu et al., and Jiang.

Rejection over Comrie (U.S. Pat. No. 5,820,668)

-Response

In order to establish a case of *prima facie* anticipation of claims 78, 99, 108, 115, 123, and claims depending therefrom, the examiner must establish that the references disclose every limitation of the claims either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed. Cir. 1999).

Comrie teaches an “inorganic binder composition” (“Comrie’s binder”) having a first constituent that is “a poly(sialate) or a poly(sialate-siloxo).” Col. 2, ll. 50, 63-64. Comrie’s binder comprises a poly(sialate) or a poly(sialate-siloxo) in the following ranges by weight of the total binder composition:

“between 62 and 90%” - *See* Examples 1

“between 60 and 90%” - *See* Examples 2

“between 60 and 90%” - *See* Examples 3

“between 60 and 90%” - *See* Examples 4

“between **40** and 60%” - *See* Examples 5.

(emphasis added). If Comrie’s binder comprises “between **40** and 60%” by weight of poly(sialate) or a poly(sialate-siloxo), then the examiner has not established that Comrie’s binder comprises more than 60% by weight fly ash. Thus, the examiner has not pointed to a teaching or suggestion in Comrie of a cementitious composition or cementitious product consisting essentially of:

- (1) “about 80% or more by weight one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 123;
- (2) “about 80% or more by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,” as required by claim 78;
- (3) “about 80% by weight one or more type F fly ash based on the total weight % of the cementitious composition,” as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Comrie of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 115.

Thus, the examiner has not established that Comrie discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over Comrie be withdrawn.

Rejection over Ko (U.S. Pat. No. 6,409,819)

The examiner rejected claims 1-122 as being anticipated by Ko.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom over Ko for the same reasons as stated above. Ko teaches an “activated supersulphated aluminosilicate binder” (“Ko’s binder”) comprising blast furnace slag “**always present in an amount exceeding 35% by weight.**” See Col. 3, ll. 14-15, 57-60.

If Ko’s binder comprises blast furnace slag “always present in an amount exceeding 35% by weight,” then the examiner has not established that Ko’s binder comprises more than 65% by weight fly ash. Thus, the examiner has not pointed to a teaching or suggestion in Ko of a cementitious composition or cementitious product consisting essentially of:

- (1) “**about 80% or more** by weight one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 123;
- (2) “**about 80% or more** by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,” as required by claim 78;
- (3) “**about 80% by weight** one or more type F fly ash based on the total weight % of the cementitious composition,” as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Ko of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) **“about 80% or more by weight** of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) **“about 80% or more** by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 115.

The examiner has not established that Ko discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc., at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999)*. Applicant respectfully requests that the rejection of the claims over Ko be withdrawn.

Rejection over Sobolev (U.S. Pat. No. 6,645,289)

The examiner rejected claims 1-122 as being anticipated by Sobolev.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom over Sobolev for the same reasons as stated above. Sobolev teaches a “dry and semi-dry admixtures composition” (“Sobolev’s composition”) including **“up to 70% of mineral indigenous admixtures,”** wherein “fly ash . . . can be used as mineral admixtures.” *See* Col. 2, ll. 14; Col. 4, ll. 65-66; and Col. 5, ll. 5-7.

If Sobolev’s composition includes “up to 70% of mineral indigenous admixtures,” then the examiner has not established that Sobolev’s composition comprises more than 70% by weight fly ash. Thus, the examiner has not pointed to a teaching or suggestion in Sobolev of a cementitious composition or cementitious product consisting essentially of:

- (1) “about 80% or more by weight one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 123;
- (2) “about 80% or more by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,” as required by claim 78;
- (3) “about 80% by weight one or more type F fly ash based on the total weight % of the cementitious composition,” as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Sobolev of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 115.

The examiner has not established that Sobolev discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc., at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999)*. Applicant respectfully requests that the rejection of the claims over Sobolev be withdrawn.

Rejection over Day et al. (U.S. Pat. No. 6,565,647)

The examiner rejected claims 1-122 as being anticipated by Day et al.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom over Day for the same reasons as stated above. Day teaches a “cementitious shotcrete composition comprising a blend of the following ingredients in the following percentages by weight:

Cement	50% to 99%
Zeolite	0.3% to 49.3%
Barite	0.7% to 49.7%.”

See Col. 2, ll. 53 -60. If Day teaches a composition comprising cement at “50% to 99%” by weight, then the examiner has not established that the composition of Day comprises more than 50% by weight fly ash. Thus, the examiner has not pointed to a teaching or suggestion in Day of a cementitious composition or cementitious product consisting essentially of:

- (1) “**about 80% or more** by weight one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 123;
- (2) “**about 80% or more** by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,” as required by claim 78;
- (3) “**about 80% by weight** one or more type F fly ash based on the total weight % of the cementitious composition,” as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Day of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 115.

The examiner has not established that Day et al. discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over Day et al. be withdrawn.

Rejection over Classen et al. (U.S. Pat. No. 6,419,738)

The examiner rejected claims 1-122 as being anticipated by Classen et al.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom over Classen et al. Classen et al. teaches a hydraulic binder (“Classen’s binder”) that is “essentially constituted by sulfoaluminate cement.” *See* Abstract. The sulfoaluminate cement in Classen’s binder may be “substituted with different additives so as to decrease the quantity of cement used for inerting. These additives (introduced separately) were fly ash, slag, and three different zeolites.” Col. 5, ll. 6-10.

As shown in Table 4, Classen's binder comprises fly ash up to "16.2%" content of the "additive in the inerting binder." Col. 5, ll. 40-47. If Classen's binder comprises up to "16.2%" fly ash, then examiner has not pointed to a teaching or suggestion in Classen of a cementitious composition or cementitious product consisting essentially of:

- (1) "about 80% or more by weight one or more fly ash based on the total weight % of the cementitious composition," as required by claim 123;
- (2) "about 80% or more by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin," as required by claim 78;
- (3) "about 80% by weight one or more type F fly ash based on the total weight % of the cementitious composition," as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Classen of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) "about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition," as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) "about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition," as required by claim 115.

Thus, the examiner has not established that Classen et al. discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over Classen et al. be withdrawn.

Rejection over Fu et al. (U.S. Pat. No. 5,624,489)

The examiner rejected claims 1-122 as being anticipated by Fu et al.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom over Fu et al. for the following reasons: The examiner has not pointed to a teaching or suggestion in Fu et al. of “alkali-containing zeolite, alkali-containing feldspathoid, and combinations thereof,” that serve as the alkali source for catalyzing pozzolonic reactions as claimed.

For instance, claim 123 reads:

A cementitious composition **consisting essentially of:**

about 80% or more by weight one or more fly ash based on the total weight % of the cementitious composition;

one or more compounds comprising Ordinary Portland cement; and

a quantity of one or more catalyst selected from the group consisting of an alkali-containing zeolite, an alkali-containing feldspathoid, and combinations thereof, **the quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between the one or more compounds comprising Ordinary Portland cement and the fly ash.**

The use of the words “consisting essentially of” to define the cementitious composition, cementitious product, and methods in claims 78, 99, 108, 115, 123 and claims depending therefrom amounts to a requirement that the cementitious composition, cementitious product, and methods necessarily include the listed ingredients and are open to any other ingredients that do not materially affect the basic and novel properties of the cementitious composition, product or methods. *See Ex Parte Davis*, 80 USPQ 448, 449-450 (Pat. Off. Bd. App. 1948). Thus, nothing else needs to be added to the cementitious composition, cementitious product or methods

of the instant claims to catalyze the pozzolonic reaction - outside of alkali-containing zeolite, alkali-containing feldspathoid, and combinations thereof.

Fu et al. teaches using inorganic salts “containing sodium or potassium cations.” See Col. 2, line 38. As further explained in Fu, “[i]norganic salts were widely studied in the present research as agents to prevent hydrogarnet formation. It has been found that in the presence of sodium ions, crystallization of hexagonal stratlingite plates in hydrated high alumina cement systems containing pozzolans is significantly accelerated”. Col. 5, ll. 13-18. Specifically, Fu et al. teaches compositions comprising **high alumina cement and a “conversion-preventing additive which comprises 80-99 wt. % of a siliceous pozzolan and 1-20 wt.% of at least one inorganic salt having sodium or potassium cation and an anion selected from the group consisting of sulfate, carbonate, nitrate, silicate, phosphate, chloride and bromide.”** Col. 2, ll. 63-65 to Col. 3, ll. 1-2 (emphasis added). The examiner has not pointed to a teaching or suggestion in Fu et al. of a cementitious composition or cementitious product consisting essentially of:

- (1) “a quantity of one or more catalyst selected from the group consisting of an alkali-containing zeolite, an alkali-containing feldspathoid, and combinations thereof, the quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between the one or more compounds comprising Ordinary Portland cement and the fly ash,”

as required by claim 123;

- (2) “a quantity of one or more alkali-containing zeolite catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between the Ordinary Portland cement and the inorganic material,”

as required by claim 78; and

- (3) “catalyst selected from the group consisting of alkali-containing zeolite, alkali-containing feldspathoid, and a combination thereof,”

as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Fu of a method of making a cementitious composition comprising mixing materials **consisting essentially of**:

- (4) “the third quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between a majority of the fly ash and the Ordinary Portland cement,”

as required by claim 108; or a method of catalyzing a pozzolonic reaction comprising mixing materials **consisting essentially of**:

- (5) “the third quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between a majority of the fly ash and the Ordinary Portland cement,”

as required by claim 115.

The examiner has not established that Fu discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over Fu be withdrawn.

Rejection over Fu et al. (U.S. Pat. No. 5,494,513)

The examiner rejected claims 1-122 as being anticipated by Fu et al.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom over Fu et al., for the same reasons as stated above.

Fu et al. teaches a lightweight concrete composition (“Fu’s composition”) comprising **“40-100 wt. % cementing material,”** wherein the cementing material “comprises about 50-80

wt. % of zeolite . . . 20-49 wt. % Portland cement and 1-8 wt. % strengthening agent.” Col. 3, ll. 63-64; Col. 4, ll. 1-4. If Fu’s composition comprises “40-100 wt. % cementing material,” then the examiner has not established that Fu’s binder comprises more than 60 wt. % fly ash. Thus, the examiner has not pointed to a teaching or suggestion in Fu of a cementitious composition or cementitious product consisting essentially of:

- (1) “**about 80% or more** by weight one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 123;
- (2) “**about 80% or more** by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,” as required by claim 78;
- (3) “**about 80% by weight** one or more type F fly ash based on the total weight % of the cementitious composition,” as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Fu of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) “**about 80% or more by weight** of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) “**about 80% or more** by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 115.

The examiner has not established that Fu discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, at 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over Fu be withdrawn.

Rejection over Jiang (Chinese patent No. 1115309C)

The examiner rejected claims 1-122 as being anticipated by Jiang.

-Response

The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom by Jiang for the same reasons as stated above. The use of the words “consisting essentially of” to define the cementitious composition, cementitious product, and methods in claims 78, 99, 108, 115, 123 and claims depending therefrom amounts to a requirement that the cementitious composition, cementitious product, and methods necessarily include the listed ingredients and are open to any other ingredients that do not materially affect the basic and novel properties of the cementitious composition, product or methods. *See Ex Parte Davis*, at 449-450 (Pat. Off. Bd. App. 1948). Thus, nothing else needs to be added to the cementitious composition, cementitious product or methods of the instant claims to catalyze the pozzolonic reaction - outside of alkali-containing zeolite, alkali-containing feldspathoid, and combinations thereof.

Jiang teaches proportioning raw material with percentages based on the total weight of the raw materials as follows:

“10-25% of CaO (including the CaO brought in with other materials), 2.5-10% of gypsum (by weight of SO₃, including the SO₃ brought in with other materials), 65-87.5% of coal fly ash, and 0-5% of soft plastic zeolite.”

See Supplemental IDS submitted with the response (Page 3, ¶ 4 of translated Chinese patent No. 1115309C to Jiang) (emphasis added). The examiner has not pointed to a teaching or suggestion in Jiang of a cementitious composition or cementitious product consisting essentially of:

- (1) “a quantity of one or more catalyst selected from the group consisting of an alkali-containing zeolite, an alkali-containing feldspathoid, and combinations thereof, the quantity of one or more catalyst providing

sufficient alkali metal to catalyze the pozzolonic reaction between the one or more compounds comprising **Ordinary Portland cement and the fly ash,**

as required by claim 123;

- (2) “a quantity of one or more **alkali-containing zeolite catalyst** providing sufficient alkali metal to catalyze the pozzolonic reaction between the **Ordinary Portland cement and the inorganic material,**”

as required by claim 78; and

- (3) “**about 80% by weight one or more type F fly ash based on the total weight % of the cementitious product, about 10% by weight of Ordinary Portland cement based on the total weight % of the cementitious product, and from about 0.1% to about 10% by weight of a catalyst based on the total weight % of the cementitious product, the catalyst selected from the group consisting of alkali-containing zeolite, alkali-containing feldspathoid, and a combination thereof,**”

as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in Jiang of a method of making a cementitious composition comprising mixing materials **consisting essentially of:**

- (4) “a third quantity of one or more catalyst selected from the group consisting of **alkali-containing zeolite, alkali-containing feldspathoid, and combinations thereof,** to produce the cementitious composition, the third quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between a majority of the **fly ash and the Ordinary Portland cement,**”

as required by claim 108; or a method of catalyzing a pozzolonic reaction comprising mixing materials **consisting essentially of:**

- (5) “a third quantity of one or more catalyst selected from the group consisting of **alkali-containing zeolite, an alkali-containing feldspathoid, and combinations thereof,** the third quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between a majority of the **fly ash and the Ordinary Portland cement,**”

as required by claim 115.

The examiner has not established that Jiang discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over Jiang be withdrawn.

Rejection over Beckham et al., Sun, Yamazaki, Jin, Gu, Wu, Jun, Chen et al. Han, Kim, Lee, Janotka et al., Niepelova et al., Gomes, Zhang, Yamamoto, Han et al., Popovici, Haruna, Xia, Paschenko, Kozlova, Dolezsai et al., Sumitomo, Royak et al.

The examiner has rejected claims 1-122 as being anticipated by each of the above listed references for similar reasons as discussed above. The examiner has not established a prima facie case of anticipation of claims 78, 99, 108, 115, 123 and claims depending therefrom because the examiner has not pointed to a teaching or suggestion in any of the above listed references of a cementitious composition or cementitious product consisting essentially of:

- (1) “**about 80% or more** by weight one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 123;
- (2) “**about 80% or more** by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,” as required by claim 78;
- (3) “**about 80% by weight** one or more type F fly ash based on the total weight % of the cementitious composition,” as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in any of the above listed references of a method of making a cementitious composition comprising mixing materials consisting essentially of a first quantity of:

- (4) “**about 80% or more by weight** of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of a first quantity of:

- (5) “about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition,” as required by claim 115.

Atlas Powder Co. v. Ireco Inc., at, 1346, 51 USPQ2d at 1945 (Fed. Cir. 1999). Applicant respectfully requests that the rejection of the claims over the above references be withdrawn.

Claim Rejections – 35 U.S.C. §103

The examiner has rejected claims 1-122 under 35 U.S.C. §103(a) as obvious over the above cited references.

Response

Applicant explained above why the cited references do not anticipate claims 78, 99, 108, 115, 123 and claims depending therefrom. The arguments apply equally to the 35 U.S.C. §103(a) rejection. In order to establish that the claims are *prima facie* obvious over the prior art, the examiner must point to two things in the prior art, and not in the applicant's disclosure -- (1) the suggestion of the invention, and (2) the expectation of its success. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). The examiner has not met this burden.

As stated above, the examiner has not pointed to a teaching or suggestion in any of the cited references of a cementitious composition or cementitious product consisting essentially of:

- (1) about 80% or more by weight one or more fly ash based on the total weight % of the cementitious composition;

one or more compounds comprising Ordinary Portland cement; and

a quantity of one or more catalyst selected from the group consisting of an alkali-containing zeolite, an alkali-containing feldspathoid, and combinations thereof, the quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between the one or more compounds comprising Ordinary Portland cement and the fly ash,"

as required by claim 123;

- (2) "about 80% or more by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,

about 10% by weight of Ordinary Portland cement based on the total weight % of the cementitious composition, and

a quantity of one or more alkali-containing zeolite catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between the Ordinary Portland cement and the inorganic material,

as required by claim 78;

- (3) “about 80% by weight one or more type F fly ash based on the total weight % of the cementitious product, about 10% by weight of Ordinary Portland cement based on the total weight % of the cementitious product, and from about 0.1% to about 10% by weight of a catalyst based on the total weight % of the cementitious product, the catalyst selected from the group consisting of alkali-containing zeolite, alkali-containing feldspathoid, and a combination thereof,”

as required by claim 99.

Nor has the examiner pointed to a teaching or suggestion in any of the above listed references of a method of making a cementitious composition comprising mixing materials consisting essentially of:

- (4) “a first quantity of about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition , a second quantity of Ordinary Portland cement, and a third quantity of one or more catalyst selected from the group consisting of alkali-containing zeolite, alkali-containing feldspathoid, and combinations thereof, to produce the cementitious composition, the third quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between a majority of the fly ash and the Ordinary Portland cement,”

as required by claim 108;

or a method of catalyzing a pozzolonic reaction comprising mixing materials consisting essentially of:

- (5) “a first quantity of about 80% or more by weight of one or more fly ash based on the total weight % of the cementitious composition and a second quantity of Ordinary Portland cement with a third quantity of one or more catalyst selected from the group consisting of alkali-containing zeolite, an alkali-containing feldspathoid, and combinations thereof, the third quantity of one or more catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between a majority of the fly ash and the Ordinary Portland cement,”

as required by claim 115.

The examiner clearly has not made the required particular findings as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected the claimed components for combination in the manner claimed. *In re Kotzab*, 55 U.S.P.Q.2d at 1317-1318. Nor has the examiner pointed to a teaching or suggestion that would motivate a person of ordinary skill in the art to modify the cited references to require the claimed cementitious composition, product or methods. *In re Brouwer*, 37 U.S.P.Q.2d 1663, 1666 (Fed. Cir. 1995). For all of the foregoing reasons, the examiner has not established a case of *prima facie* obviousness.

Rejections under 35 USC §112, Second Paragraph

The examiner has rejected claims 1-122 under 35 USC §112, second paragraph.

Response

Applicant traverses on the ground that the rejections are not proper under 35 U.S.C. § 112 because “one skilled in the art would understand all language in the claims when read in light of the specification, as the claims must be.” *Rosemount, Inc. v. Beckman Instruments, Inc.*, 221 U.S.P.Q. 1, 7 (Fed. Cir. 1984), citing *Caterpillar Tractor Co. v. Berco, S.P.A.*, 219 U.S.P.Q. 185 (Fed. Cir. 1983). Claims 1 and 90 have been canceled and claim 78 has been amended to read:

“A cementitious composition consisting essentially of:

about 80% or more by weight of a inorganic material based on the total weight % of the cementitious composition, the inorganic material selected from the group consisting of fly ash, silica fume, diatomaceous earth, calcined or uncalcined diatomite, pozzolonic clays, calcined or uncalcined volcanic ash, bagasse ash, rice hull ash, and metakaolin,

about 10% by weight of Ordinary Portland cement based on the total weight % of the cementitious composition, and

a quantity of one or more alkali-containing zeolite catalyst providing sufficient alkali metal to catalyze the pozzolonic reaction between the Ordinary Portland cement and the inorganic material.”

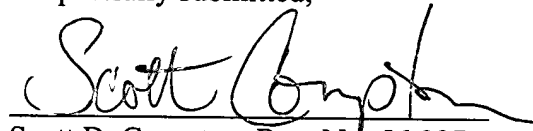
Applicant respectfully requests that the rejection of the claims under 35 USC §112, second paragraph, be withdrawn.

CONCLUSION

Applicant respectfully requests reconsideration and allowance of all of the pending claims.

The Commissioner is hereby authorized to charge any fees in connection with this request, or to credit any overpayment, to Deposit Account No. 50-0997 (RESINC-0004-US) maintained by Paula D. Morris & Associates, P.C.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Scott Compton", written over a horizontal line.

Scott D. Compton, Reg. No. 56,097
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